Utilization of research evidence by nurses

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Abstract
This paper challenges the hegemony (the mindset prevailing within education and health-care environments) that produces and maintains the problems associated with nurses using research evidence in their practise. The challenge is organized around the construct of change. The envisaged changes concern what nurses think and do in relation to nursing research. The position held in the present paper is that the use of research evidence by nurses in their practise will remain a challenge until changes occur to the ways that nurses understand, value and initiate research. It is argued that changing the ways that nurses understand, value and initiate research requires an ideological shift: a re-education from one set of beliefs, perceptions, values and practises to another. The paper concludes with some suggestions for transforming the hegemonic influences of nurse education systems and the health-care organizations in which nurses work.

Introduction
The term 'evidence-based practise' is becoming a buzz word within nursing. The need for quality patient outcomes and cost-effective care has made it essential that nurses base their practise on research evidence. The notion that research-based knowledge is necessary to improve clinical practise is not new. Ever since Florence Nightingale used research evidence to bring about vital changes in the delivery of health care (Roberts & Taylor, 1998), research has been increasingly recognized as an essential basis for nursing knowledge and practise development. Today, nursing research constitutes an extensive body of literature that will indubitably continue to flourish as the nursing profession responds to current demands for evidence-based practise, a practise underpinned by research utilization. However, despite an increase in research output, utilization of research evidence by nurses in clinical settings remains a challenge.

Prevailing research culture
A research culture develops in tandem with research participation, research dissemination and utilization of research evidence. These pursuits demand such capabilities as knowledge justification and verification, critical inquiry and investigation, and scholarly writing, interpretation and discourse. Academic nurse education has positioned nurses to not only acquire these capabilities but also to develop a positive research culture in the sense that across all areas of nursing, 'research is perceived favorably and used pro-actively by the majority of practitioners' (Le May et al., 1998). However, there is evidence to suggest that research activities, such as participation, dissemination, and utilization of research evidence, are still not perceived favorably or used proactively by the majority of nurses.

Recent Australian reports and reviews on various aspects of nursing education provide examples of this marginalization and devaluing of research activities. One purpose of an early review (Reid, 1994) was to recommend measures for improving the effectiveness of nurse education. In a chapter dealing with academic staff and research, six recommendations were made that focused on staff development, research funding, and scholarships to encourage and develop researchers in nursing. A very recent report notes that there is no evidence of implementation of the vast majority of these recommendations (Johnson & Preston, 2001).

Another example from Australia of research inactivity by nurses is provided by a 1996 research study. Although 91% of nurse respondents agreed that nursing research was necessary to improve clinical practise, only 30% had conducted research and, perhaps of more import in the light of current demands for evidence-based practise, only 15% regularly read research (Wright et al., 1996). Results of a UK study (McSherry, 1997) demonstrated that although 92.5% of the nurse participants were in agreement with research-based practises, 62.5% had a poor understanding of the research process.

Furthermore, it has been determined that clinicians tend to construe nurse researchers as 'ivory tower' academics who generally pursue theoretical rather than practise goals with subsequent research findings that are not applicable to practise issues (Hicks & Hennessy, 1997; Clarke & Proctor, 1999; Le May et al., 1998; Upton, 1999). While opinion about the position of research activity within professional practise ranges from being an essential and necessary component of practise to being exclusively the responsibility of outsiders (Clarke & Proctor, 1999), generally nurse clinicians view research as separate to practise (Burrows & McLeish, 1995).

Research evidence also suggests that when nurses do participate in research they tend not to submit their work for publication. One study revealed that only 58% of the participants wrote up their research and of these, only 10% submitted for publication with only 9% being successful (Hicks, 1995). Research knowledge, as with any other form of knowledge, is arguably of little consequence if it is not reported and used. For nursing research this argument can be extended to infer that research knowledge is of little value if it is not used to improve patient care (LoBiondo-Wood & Haber, 1998). This extended argument assumes further significance in light of the claim by Hicks (1995) that there is a shortfall in both the quantity and quality of published research with the capacity to alter practise.

From these research findings it can be deduced that nurses generally hold negative attitudes towards research; that the majority of clinical nurses perceive research to be something apart from their practise and, in the research they do read, find little to inform their practise. Such deductions have important implications for the utilization of research evidence by nurses in clinical settings.

The position held in the present paper is that the use of research evidence by nurses in their practise will remain a challenge until changes occur to the ways that nurses understand, value and initiate research. It is argued that changing the ways that nurses understand, value and initiate research will require an ideological shift: a re-education from one set of beliefs, perceptions, values and practises to another. Essentially, the present paper is coming from a position that contests the hegemony the mindset

prevailing within nurse education systems and health-care organizations that produces and maintains the problem.

An ideological shift

Hegemony may best be thought of as:

> . . . an ongoing ideological control which is taken for granted by social members. Hegemony can be said to occur when certain groups have unequal power over other groups, and benefit from this inequality, and this situation is presented as right and normal, historically defined (Foster, 1986).

Within nurse education systems and the health-care organizations in which nurses work the effects of the 'ongoing ideological control that is taken for granted' is so pervasive that its influence may not even be recognized. 'Ideology, as a set of beliefs and practises, influences every aspect of our experience and the way we make sense of that experience' (Lovat & Smith, 1995). Hegemony is the process through which the knowledge and messages associated with the worldview of the dominant group are imposed and willingly accepted; a circumstance not unusual in environments that are hierarchical.

> Either consciously or, more often, unconsciously, the selection of knowledge, and the representations of this . . . present a particular view of events, actions and relations. In so doing, the interests of some . . . are protected and enhanced at the expense of others. (Lovat & Smith, 1995).

Changing the ways that nurses understand, value and initiate research will thus require an ideological shift: a re-education from one set of beliefs, perceptions, values and practises to another.

The envisaged changes are about what nurses think and do in relation to nursing research. From the perspective taken in the present paper, the changes are inextricably connected with individual nurses and their personal constructs: how they make sense of, and view, their world. Although the changes are essentially cognitive, structural change will also be required because changing entrenched and traditional practises requires 'more than a change in beliefs, it requires a change in the structures which have significantly conditioned and shaped those beliefs' (Smith, 1993).

Two structures responsible for conditioning and shaping beliefs about research are nurse education systems and the health-care organizations within which nurses work. However, this argument is circular and somewhat paradoxical in the sense that structural change is dependent on individual change because 'organizations learn only through individuals who learn' (Senge, 1990), or as Fullan (1993) argues, systems do not change by themselves; people change systems. Thus, it is the hegemony the mindset prevailing within nurse education systems and health-care organizations that produces and maintains the problem, which becomes the major barrier to change.

All of this strongly implies that, to be successful, any change strategy aimed at enhancing the use of research evidence must incorporate the subjective realities of nurse clinicians. It also implies that the barriers to change in the ways that nurses understand, value and initiate research can effectively be breached through a change

in individual mindset. While it is increasingly acknowledged that research utilization is an organizational issue as much as it is an issue for the individual practitioner (Muir Gray, 1997; Roberts & Taylor, 1998), organizational change comes only after change in the mindsets that are maintaining the status quo. The envisaged changes will be difficult and not without conflict; nor will they occur overnight. However, unless nurse leaders advocate change in the ways that nurses understand, value and initiate research, use of research evidence by clinical nurses is likely to remain problematic.

Influence of systems and organizations

Nurses acquire the knowledge, skills and competencies they need to begin to practise nursing during their basic undergraduate education; it is then that they begin to understand the real world of nursing. It is through education that they become aware of what 'learning and understanding in the discipline consists of' (Ramsden, 1992). For example, contemporary nursing deems it essential that students acquire 'the broad knowledge base and analytical ability to make informed decisions about care and its management soundly based on research rather than merely custom and practise' (Jinks, 1991). Thus, during initial nurse education, students are introduced to the fundamental concepts and skills of evidence-based practise.

As students they are introduced to critical approaches to problem identification and decision- making, to information search and retrieval skills, to research processes and methodologies, and to critical approaches to the reading and evaluation of research evidence. Furthermore, justification of performance based on conceptual, theoretical or research evidence is intrinsic to the nature of academic work. Assignments, for example, must be based on evidence from the literature and, during clinical practicums, students must base clinical decision-making and specific nursing interventions on relevant theory or research evidence. The inclusion of content of this nature within formal curricula is not up for question. However, unintended curricula may be delivering other messages, not only in formal classroom contexts but also in other environments in which teaching and learning takes place.

The hidden curriculum

The unintended curriculum is hidden and not explicitly intended (Print, 1993; Glatthorn, 1999). Part of the hidden curriculum consists of the values and attitudes transmitted by those with whom we come in contact. Consider for example the effect registered nurses, doctors and other health professionals have on students during clinical practicums. The values and attitudes transmitted in the 'real' world of nursing the workplace tend to have a stronger influence than the official curriculum or intentional learning transmitted in the classroom. Therefore, many of the values, attitudes and beliefs that are internalized during classroom learning tend to be modified or changed in keeping with those of the work setting. This modification is often necessary in order for the student to escape the unpleasant feelings associated with cognitive dissonance, a state that unfortunately is likely to arise whenever orientating to a new clinical area.

This is not to imply that internalizing established nursing culture is not a desired goal for nurses. Rather, the transmission of important aspects of culture is a primary function of education. A culture tends to be self-perpetuating: it defines 'the way we do things around here' (Simonsen, 1997). It is by 'internalizing the definitions,

assumptions, and arbitrary typifications taken for granted and communicated by significant others' that we become socialized into a culture (Mezirow, 1991). However, when learning the way we do things around here that is, when being socialized into a culture it is important that the capacity to think critically and to distance oneself in order to make judgments has been developed or else mere socialization occurs.

Without the capacity to think critically and to distance oneself in order to make judgments the attendant danger when entering a new culture is that existing practises and beliefs will be seen as unchallengeable and unchangeable. For example, nurse clinicians work in environments that are generally bureaucratic and which promote consistency and conformity to routine with an emphasis on completing tasks rather than on considerations of best practise (Roberts & Taylor, 1998). Within such environments, where economic conservatism and emphasis on strategies for reducing health care expenditure predominates where cost-effectiveness and outcomes are the driving forces there may be many existing practises and beliefs deserving challenge and question. For instance, if 'the way we do things around here' is not to value research, and the capacity to evaluate the situation critically (to challenge existing practises and beliefs and uncover underlying assumptions) is not developed in the newcomer, it is likely that socialization into 'the way we do things around here' will quickly occur.

Much of the pervasive power of a hidden curriculum comes from the fact that it is hidden; that it is usually not recognized, much less discussed or challenged. Despite what is written in formal curricula, it is clear that hidden curricula also influence what clinicians (first as students and then as registered nurses) learn and understand in order to practise nursing. However, within any environment much of the power of hidden curricula would be dissipated if questions were raised not only about what is being done, but also about why it is being done, how it is being done, and how it could be improved. If these sorts of questions formed the basis for open and honest debate by all stakeholders, then 'the way we do things around here' is likely to be founded on critical and contemporary thinking and the existing state of affairs actively chosen, not just passively tolerated.

The hegemonic influence of nurse education systems and workplace environments does not stop with how nurses learn and understand about fundamental nursing concepts and skills such as research and evidence-based practise. It also impacts on the meaning that nurses attach to the term 'research', and how they value and approach research.

Meaning of 'research'

Humans are born with the inherent need to explore their environment (Reio & Wiswell, 2000) or to determine the who, what, why, how, or when of some phenomena, and since time immemorial, humans have engaged in inquiry to find answers. Today there are many different theories of knowledge and interpretative frameworks to guide those who engage in inquiries in order to investigate and understand the world. However, most, if not all, of the methodologies can be subsumed under one or other of two paradigms that essentially represent polar views: the quantitative research paradigm (also known as the positivist tradition) or the

qualitative research paradigm (also known as the naturalistic tradition). The different understanding between these two paradigms largely depends on how we see our world; how our beliefs, values, and attitudes influence our perspective.

Regardless of perspective, 'research' is generally understood in terms of the positivist tradition, a tradition that in many ways remains unchallenged. For example, the metaphors and the terminology most often used when research is discussed generally relate to positivism (Clarke & Proctor, 1999; Donmoyer, 1999). We commonly see aspects of the research process in terms of 'data', 'analysis', and 'subjects'. We 'write up' the 'findings'; we 'discover' the 'truth' and 'prove' 'hypotheses'. The hegemony or dominance of positivist terminology and metaphors is further shown in the very notion of 'discovery'. Discovery is generally understood in terms of finding something 'out there' that is waiting to be found, rather than in terms of something that has been developed or constructed. The use of terms and metaphors relating to the positivist tradition has become so entrenched that they are accepted as right and normal and non-problematic. They have become omnipotent in research discourses to the point that 'other' is seen as non-compliant with the requirements of 'good research' (Clarke & Proctor , 1999).

The intention has not been to enter the exhausted (and exhausting) debate about the merits of different research orientations, but rather to illuminate the narrow way that research is traditionally understood, and the hegemony that has maintained the status quo. All paradigms are legitimate modes of inquiry and one paradigm need not be valued over another. Nurse education and workplace environments have a responsibility to ensure that a broad understanding of the term "research" is encouraged. They also have a responsibility to ensure that not only different paradigms, but also different value-perspectives related to research activity, are equally supported and valued.

Valuing research activity

The attitudes and values of those around us also influence the way research is understood and valued. Although the values and attitudes of those in the workplace may have a stronger influence on learners than the official curriculum, it is to be expected that not only what is written in unit outlines (especially content and assessment methods) but also the values and attitudes of teachers will influence student learning.

Hidden agendas or biases may unknowingly surface and influence education content. Certainly it is not uncommon for the taught curriculum to vary substantially from the written curriculum because teachers tend to give greater attention to student interests; to what they are comfortable with; to what has worked in the past; or to what they believe students need to know (Glatthorn, 1999). For example, in light of current demands for evidence-based practise and the low percentage of nurses in Australia undertaking research studies, nurse educators may give greater attention to research methodologies and processes than how to read and evaluate published research. Also, an awareness of the political need to provide hard quantifiable data in terms of outcomes (Pearson, 1991) may promote educators to give priority to quantitative research methodologies over other approaches.

If content is excluded because of hidden agendas or personal biases, or because a particular belief or value-perspective is privileged over another, there can be serious consequences in terms of the development of a nursing research culture. However, a research culture is dependent not only on those who engage in research, but also on those who engage with research. That is to say, the development of a research culture relies not only on those with the capacity to do original research, study a serious intellectual problem, and disseminate findings. It also relies on those with the capacity to use their knowledge of research processes to analyze and critique the work of others, to make connections between the different sources of knowledge, and use that knowledge to improve patient care. Thus, although nurses may be expected to engage with research as an integral part of evidence-based practise, it is unrealistic to expect all nurses to engage in research. Indubitably the beliefs, values, and attitudes of others influence not only how nurses see and understand the world of nursing but also how they value and engage in research activity. The beliefs, values, and attitudes of others also influence what components of the nursing role are valued and accepted.

For example, while it is apparent that nursing as a professional body views research as an integral component of the nursing role, that this is the view held by nurses as individuals is not as obvious. The contention is that either engaging in or with research may be perceived as only an ascribed role, a mere abstraction and unrelated to the reality of the workplace. Thus the role is neither acknowledged nor actively accepted, much less pursued by nurses in clinical environments. The reality is that, in order to provide quality managed patient care, the role of a clinical nurse in the 21st century encompasses much more than direct clinical care. Although 'clinician' may be the primary role for most nurses in clinical settings, fulfillment of other roles such as researcher, advocate, and teacher are necessary for the provision of holistic and quality care.

Nurse education has a responsibility to ensure that nurses are able to understand, engage in, and value all components of the nursing role. Workplace environments have an equal responsibility to ensure that the necessary support and resources are available for clinical nurses to engage in any activity or role necessary for the provision of quality care. However, the responsibilities of nurse education and workplace environments do not stop there. Because of their power to influence what is understood, valued and implemented in nursing practise, education and the workplace environments have a responsibility to prepare and encourage nurses to initiate research that is driven by the sorts of questions that will provide answers and evidence on which to base practise.

Initiating or approaching research

It is through nursing research that important knowledge about phenomena of interest to nurses and their clients is generated, and the researcher generally works within a paradigm that is consistent with his or her world view (Polit & Hungler, 1999). While selection of the guiding paradigm (and thus the methodical approach) is an early step in any project (Polit & Hungler, 1999), it is the research problem that most fittingly drives the study. Investigations are carried out because answers are wanted and a particular methodology is selected because it is the best way to study or find an answer to the question. Thus, as MacGuire (1991) argues, it is the purpose of the research the nature of the question posed that determines the most appropriate

approach for investigation. The nature of the question posed derives from the context in which the answer the evidence is needed.

As claimed earlier, nursing research knowledge is of little value if it is not used to improve patient care, and clinicians tend to ignore research that they do not consider relevant to their current context of care (Brink & Wood, 1994). It follows that the most valued and valuable research questions will be those generated by context and discipline-specific questions such as 'What do I want to know about my practise?' 'What sort of evidence do I need?' 'Why does this treatment work and not the other?' 'Why is it happening like this?' 'How do patients experience this?' 'How can the situation be improved?'. These sorts of questions generate research problems and questions that are relevant to nursing practise. Because clinicians want, and need, answers that are clear, practical, and applicable to the clinical situation (Brink & Wood, 1994), it is important that the question drives the study, not preference for a particular guiding paradigm.

However, the research problem and question (the purpose of the research) are frequently subordinated to methodological approach not only because the selected paradigm is preferred by the researcher but also because of other influences, such as publication access and funding allocations. For example, in the drive to promote nursing research some professional journals have given priority to the quantitative approach in order to enhance their academic status, and this in turn advantages research guided by the positivist paradigm in terms of publication access. In parallel, academic research in universities has become a major factor in funding allocations. In America, an estimated 75% of National Institutes of Health funding has been awarded to research-intensive universities (Baldwin & Nail, 2000). Nurse education has not escaped this funding requirement, which operates at a corporate and individual level, because those departments or individuals that do not produce research can handicap the final rating of a university or department (Hicks & Hennessy, 1997). This has led to a symbiotic relationship between professional nursing journals and university schools of nursing, which has helped to make quantitative studies the gold standard for evidence-based care. Researchers have been given a clear message that experimental research is the methodology favored by professional bodies especially in the academic community. However, the positivist paradigm is not always the best guide to investigating a question.

While the purpose of an investigation is clearly not always to determine cause and effect or to confirm a hypothesis, it is certainly vital that health researchers continue to investigate causation and treatment of illness and disease for purposes of health restoration. However, research is also needed to address the challenges associated with day-to-day care and, arguably, nurse researchers are best placed to do this. Traditionally, the constructs 'nursing' and 'care' have been closely associated and, while nurses are obviously not the only health professionals who care, they are the only group to claim human caring per se as their central concern (Pearson, 1991). Nursing's ethos of care based on a holistic model, together with its contemporary professional orientation rather than task orientation, challenges nurse researchers to not only vigorously pursue research that addresses the caring aspects of health-care provision, but also to utilize a range of methodological approaches in doing so. The recognition and acceptance of a variety of approaches to research as legitimate paths to knowledge is necessary because much of nursing care is too complex and unique to

be studied from any one stance (Pearson, 1991). It is essential that education and workplace environments influence and encourage nurses to learn and understand research, to value the activities of research, and to select the research methodology based on the research question.

Conclusion

The purpose of the present paper was to challenge the hegemony (the mindset prevailing within education and health care environments) that produces and maintains the challenges associated with nurses using research evidence in their practise. The challenge was organized around the construct of change and critical analysis and synthesis of relevant literature. The envisaged changes concerned what nurses think and do in relation to nursing research. It was argued that changing the ways that nurses understand, value and initiate research will require a shift a re-education from one set of beliefs, perceptions, values and practises to another. Specifically, it was argued that use of research evidence by nurses in their practise will remain a challenge until changes occur to the ways that nurses understand, value and initiate research. In the belief that critique without evocation for improvement is merely censure, some suggestions for transforming the influences of education and workplace environments are offered. These suggestions are broad and evolved during the process of advancing and articulating the central argument of this paper.

Suggestions include the following.

Ensure that 'the way we do things around here' is underpinned by critical and contemporary thinking about all aspects of nursing practise: engage in open and honest debate; share knowledge, values and opinions; challenge and possibly change problematic values and beliefs; be mindful of personal agendas and biases.

Broaden understandings of the term research, and recognize that each approach is a legitimate mode of inquiry.

Avoid stereotypical constructs that polarize and isolate research activities.

Celebrate not contest differences in methodological approaches and understandings of reality.

Value different beliefs and value-perspectives about research.

The suggestions are not sequential, nor prioritized. They are not intended to be inclusive but rather to serve as catalysts for reflection and the generation of further questions and challenges to the hegemony prevailing within nurse education systems and health-care organizations that produces and maintains barriers to the utilization of research evidence in nursing practise. Perhaps most importantly, the suggestions are applicable to all nurses regardless of primary role or level of experience.

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